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M M M M M	T T T T T	E E E E E	T T M T T	A A A A S	Y Y T Y L	G G G G G	N N N N T	A A A A S	Q Q Q P Q N	D D E D E	L L L L L	L L L L L	V V V V V	E E E E E	WT-ROS SYNROS ROS-R ROS-AR MUC-R
L L L L L	T T T T T	A A A A A	D D D D E	I I I I I	V V V V V	A A A A A	A A A A A	Y Y Y Y Y	V V V V V	S S S S S	N N N N N	H H H H H	V V V V V	V V V V V	WT-ROS SYNROS ROS-R ROS-AR MUC-R
P P P P P	V V V V V	T T S T A	E E D E E	L L L L L	P P A P P	G G N G T	L L L L L	I I I I I	S S S S A	D D D D D	V V V V V	H H H H H	T T S T S	A A A A A	WT-ROS SYNROS ROS-R ROS-AR MUC-R
L L L L L	S S S S N	G G N G N	T T T T T	S S S S T	A A V A A	P P P P P	A A Q A A	S S P S P	V V A V V	A A A A A	V V A V V	N N V N P	V V V V V	E E E E E	WT-ROS SYNROS ROS-R ROS-AR MUC-R
K K K K K	Q Q Q Q P	K K K K K	P P P P P	A A A A A	V V V V V	S S S S S	V V V V V	R R R R R	K K K K K	S S S S S	V V V V V	Q Q Q Q Q	D D D D D	D D D D D	WT-ROS SYNROS ROS-R ROS-AR MUC-R
H H Q H Q	I I I I I	V V T V T	C C C C C	L L L L L	E E E E E	C C C C C	G G G G G	G G G G G	S S N S T	F F F F F	K K K K K	S S S S S	L L L L L	K K K K K	WT-ROS SYNROS ROS-R ROS-AR MUC-R
R R R R R	H H H H H	L L L L L	T T M T M	T T T T T	H H H H H	H H H H H	S S S S N	M M L M L	T T S T S	P P P P P	E E E E E	E E E E E	Y Y Y Y Y	R R R R R	WT-ROS SYNROS ROS-R ROS-AR MUC-R
E E E E D	K K K K K	W W W W W	D D D D D	L L L L L	P P P Q P	V V T V A	D D D D D	Y Y Y Y Y	P P P P P	M M M M M	V V V V V	A A A A A	P P P P P	A A A A A	WT-ROS SYNROS ROS-R ROS-AR MUC-R
Y Y Y Y Y	A A A A A	E E E E E	A A A A A	R R R R R	S S S S S	R R R R R	L L L L L	A A A A A	K K K K K	E E E E E	M M M M M	G G G G G	L L L L L	G G G G G	WT-ROS SYNROS ROS-R ROS-AR MUC-AR
Q Q Q Q Q	R R R R R	R R R R R	K K K K K	A A R A R	N N G N R	R R R R G	P G K	K K	K K	K K	R K	K K	V		WT-ROS SYNROS ROS-R ROS-AR MUC-AR

FIG. 1(A)

<u>GCGGATCCCC</u>	<u>GGGTATGACT</u>	GAGACTGCTT	ACGGTAACGC
TCAGGATCTT	CTTGTTGAGC	TTACTGCTGA	TATCGTTGCT
GCTTACGTTT	CTAACCACGT	TGTTCCCTGTT	ACTGAGCTTC
CTGGACTTAT	CTCTGATGTT	CATACTGCAC	TTTCTGGAAC
ATCTGCTCCT	GCTTCTGTTG	CTGTTAACGT	TGAGAAGCAG
AAGCCTGCTG	TTTCTGTTCG	TAAGTCTGTT	CAGGATGATC
ATATCGTTTG	TTTGGAGTGT	GGTGGTTCTT	TCAAGTCTCT
CAAGCGTCAC	CTTACTACTC	ATCACTCTAT	GACTCCAGAG
GAGTATAGAG	AGAAGTGGGA	TCTTCCTGTT	GATTACCCTA
TGGTTGCTCC	TGCTTACGCT	GAGGCTCGTT	CTCGTCTCGC
TAAGGAGATG	GGTCTCGGTC	AGCGTCGTAA	GGCTAACCGT
CCAAAAAAGA	AGCGTAAGGT	CTGAGAGCTC	GC

**FIG. 1(B)**

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M T E T A Y G N A Q D L L V E  
ATG ACN GAR ACN GCN TAY GGN AAY GCN CAR GAY YTN YTN GTN GAR

L T A D I V A A Y V S N H V V  
YTN ACN GCN GAY ATH GTN GCN GCN TAY GTN WSN AAY CAY GTN GTN

P V T E L P G L I S D V H T A  
CCN GTN ACN GAR YTN CCN GGN YTN ATH WSN GAY GTN CAY ACN GCN

L S G T S A P A S V A V N V E  
YTN WSN GGN ACN WSN GCN CCN GCN WSN GTN GCN GTN AAY GTN GAR

K Q K P A V S V R K S V Q D D  
AAR CAR AAR CCN GCN GTN WSN GTN MGN AAR WSN GTN CAR GAY GAY

H I V C L E C G G S F K S L K  
CAY ATH GTN TGY YTN GAR TGY GGN GGN WSN TTY AAR WSN YTN AAR

R H L T T H H S M T P E E Y R  
MGN CAY YTN ACN ACN CAY CAY WSN ATG ACN CCN GAR GAR TAY MGN

E K W D L P V D Y P M V A P A  
GAR AAR TGG GAY YTN CCN GTN GAY TAY CCN ATG GTN GCN CCN GCN

Y A E A R S R L A K E M G L G  
TAY GCN GAR GCN MGN WSN MGN YTN GCN AAR GAR ATG GGN YTN GGN

Q R R K A N R P K K K R K V  
CAR MGN MGN AAR GCN AAY MGN CCN AAR AAR AAR MGN AAR GTN

FIG. 1(C)

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ROS Inverted Repeat  
DNA Binding Sites (Operator sequences)

**TATATTTCAA-TTTTA-TTGTAATATA**

*virC/virD*

\*\*\*\* \*\* \*\* \* \*\*\* \*\* \*

**TATAATTAAAATATTAAGTCTGCATT**

*ipt*

**FIG. 1(D)**

Comparison of ROS DNA Binding Site (Operator)  
Sequences

*VirC/VirD*

**TATATTTCAA  
TATATTACAA**

*ipt*

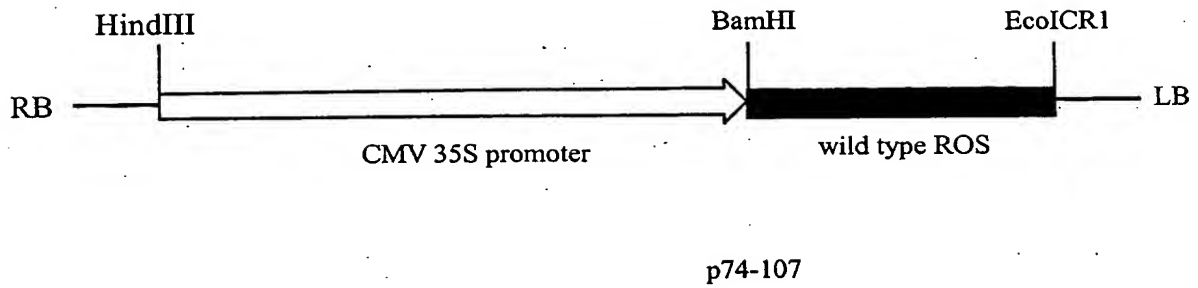
**TATAATTAAA  
AATGCGACAG**

**TATAHTtCAA  
a g gaa g**

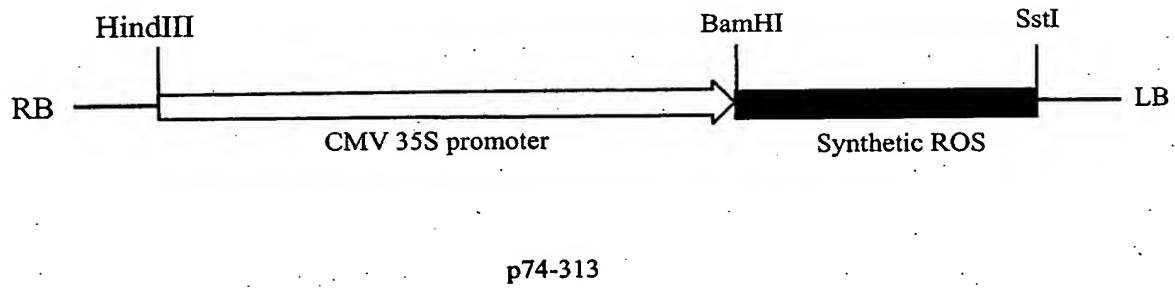
**Consensus**

**WATDHWKMAR**

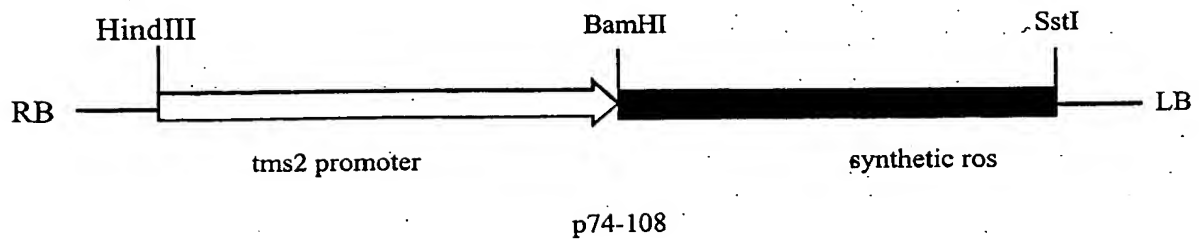
**FIG. 1(E)**



**FIG.2(A)**

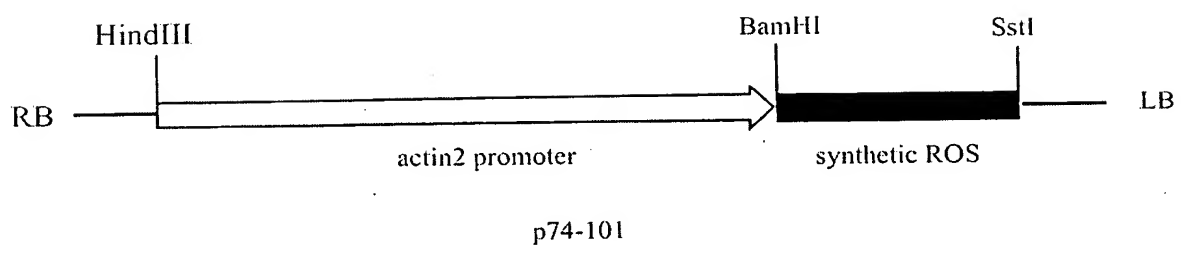


**FIG.2(B)**



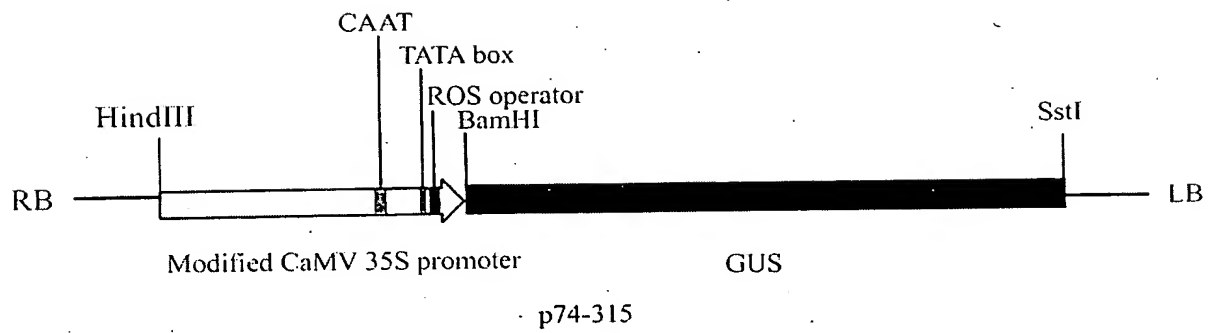
**FIG.2(C)**

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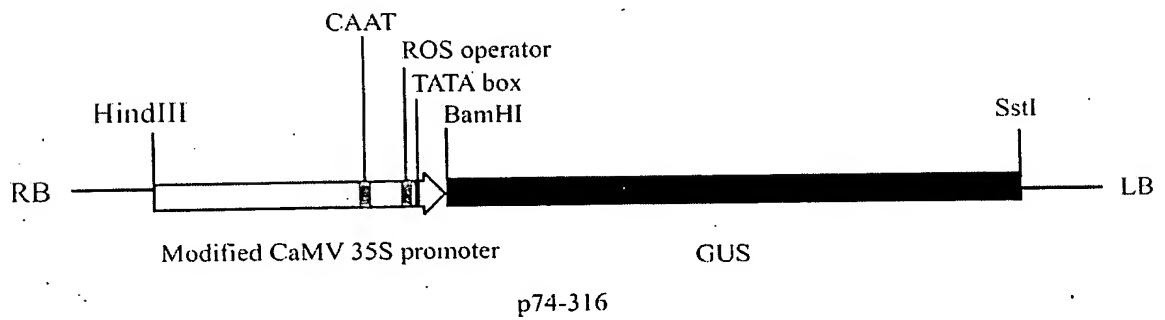


**FIG2(D)**

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**FIG. 3(A)**

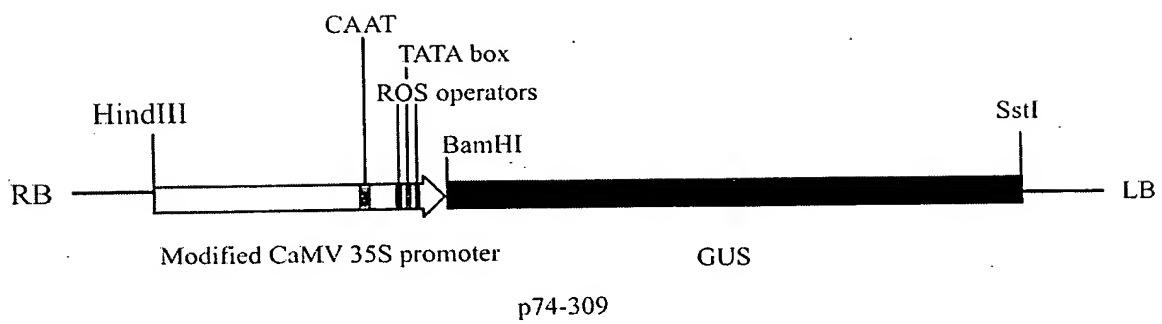


**FIG. 3(B)**



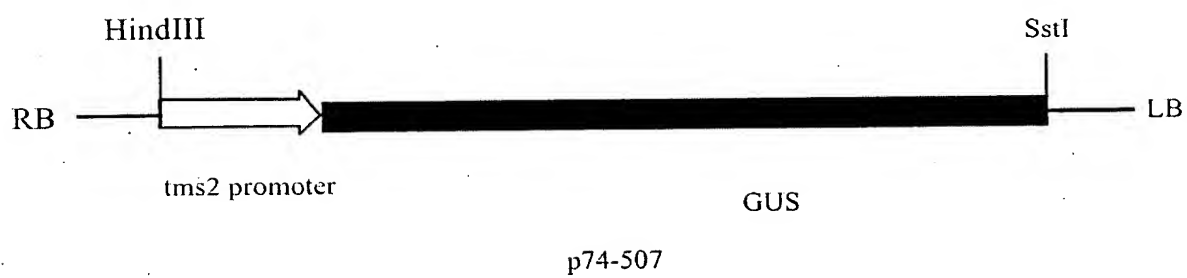
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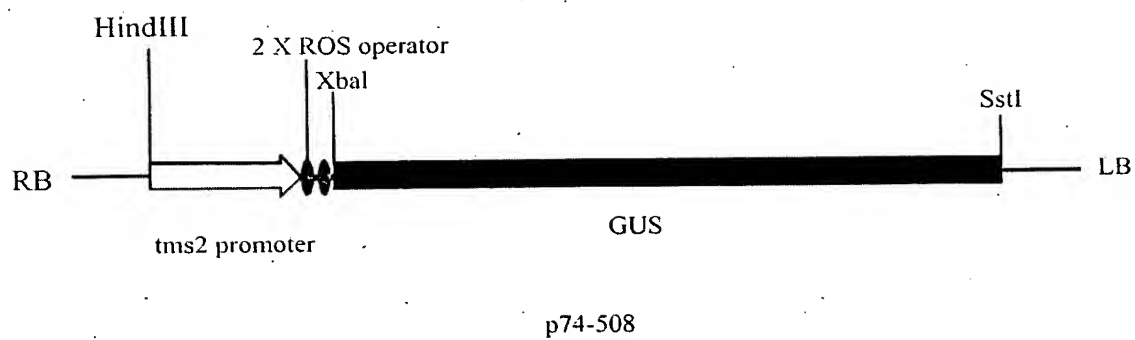


**FIG. 3(C)**

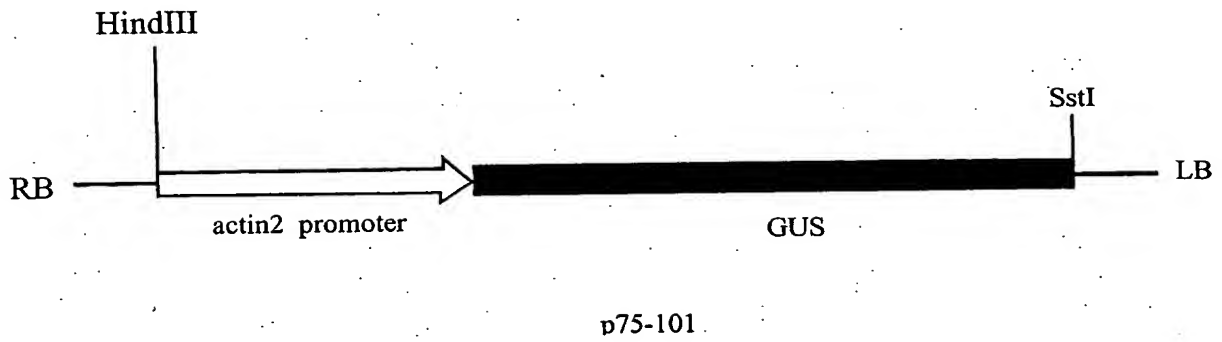
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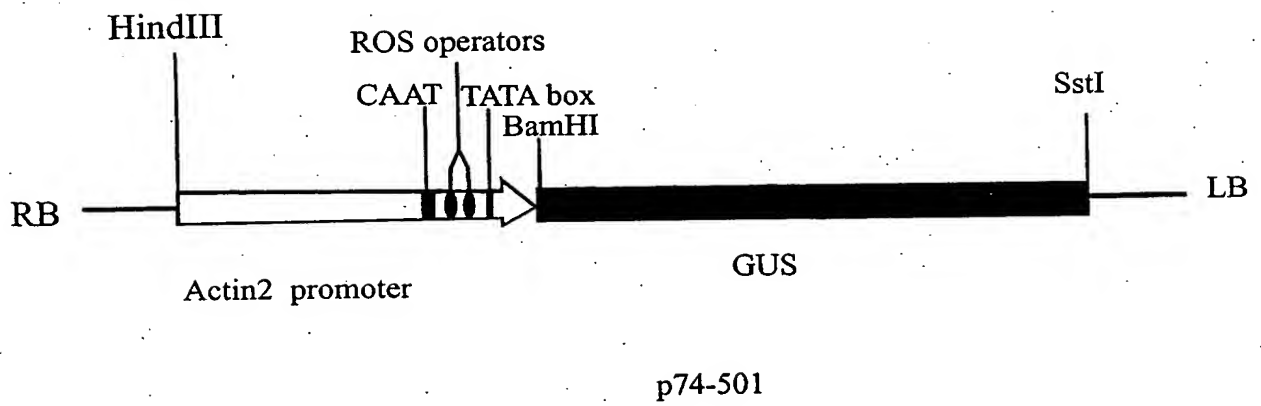
**FIG. 4(A)**



**FIG. 4(B)**



**FIG. 5(A)**



**FIG. 5(B)**

# Reporter Construct

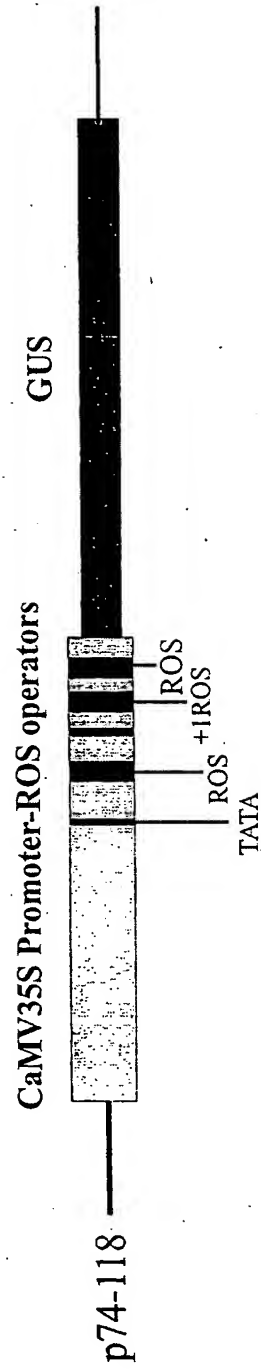
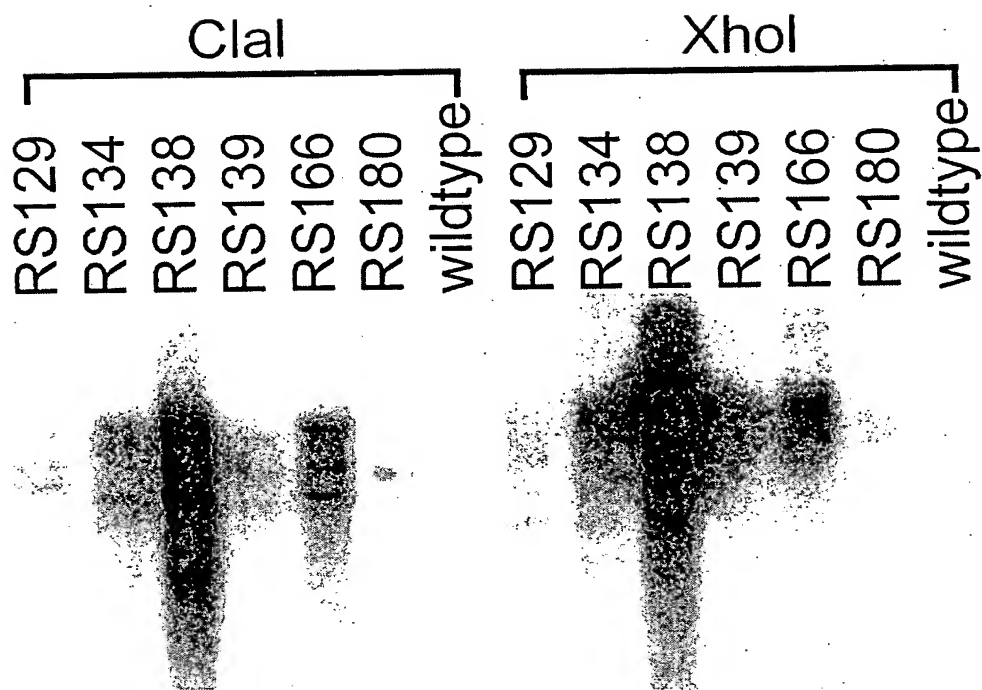


FIG. 5(C)

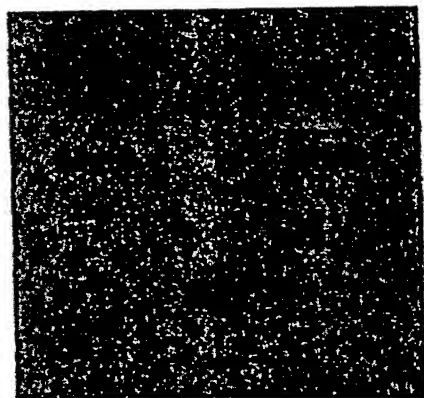
**FIG. 6 (A)**

p74-101

RS 91

RS 93

RS 121



**FIG. 6(B)**

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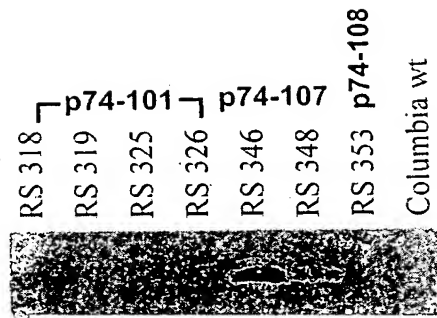


FIG. 7(A)

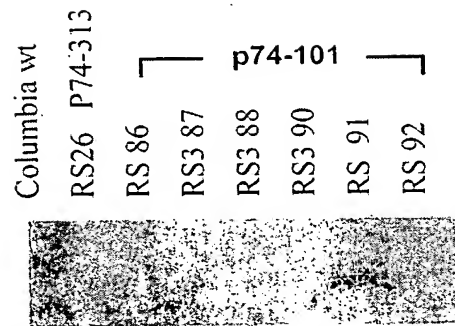


FIG. 7(B)

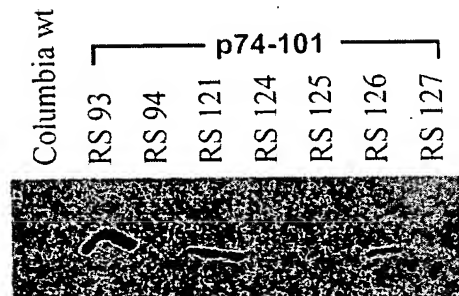


FIG. 7(C)

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Columbia wt

pBI121



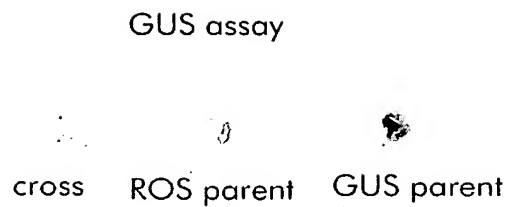
p74-501



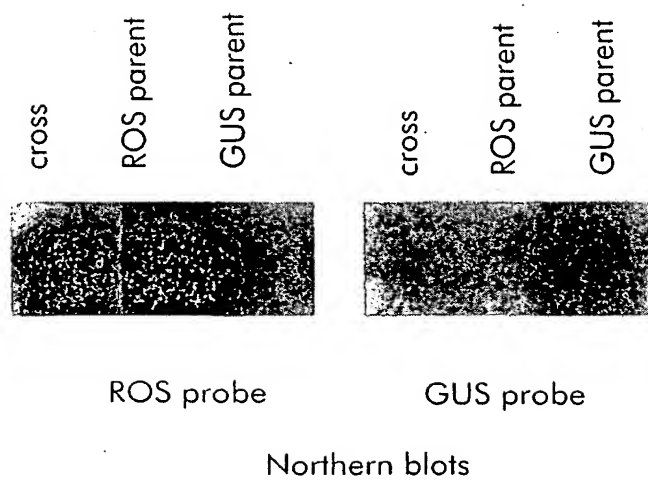
buffer

**FIG. 8**

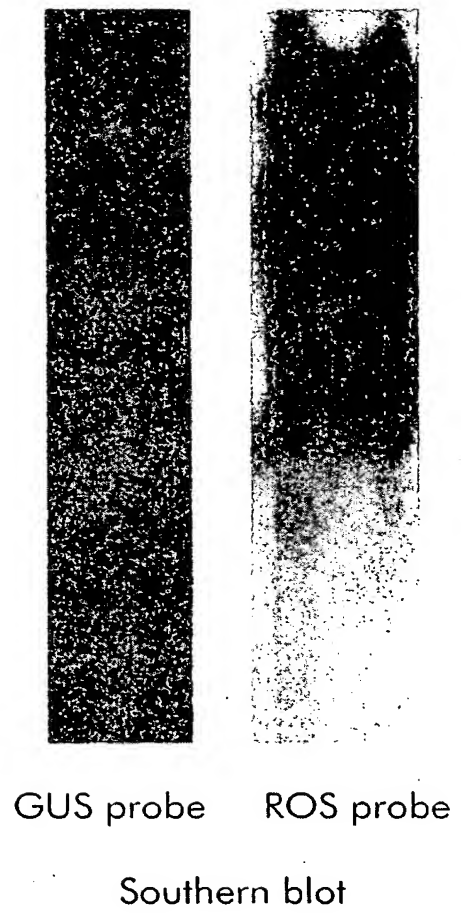




**FIG. 9(A)**



**FIG. 9(B)**



**Figure 9(C)**